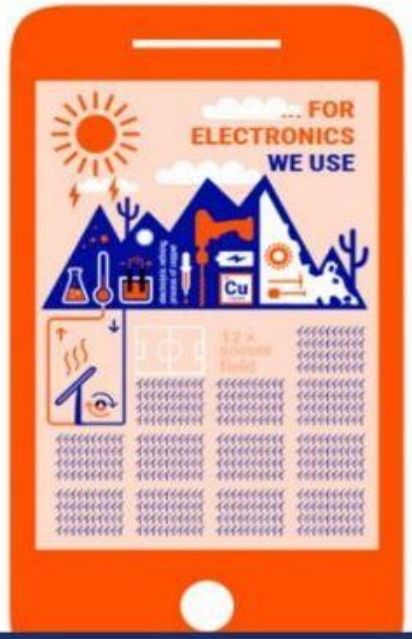
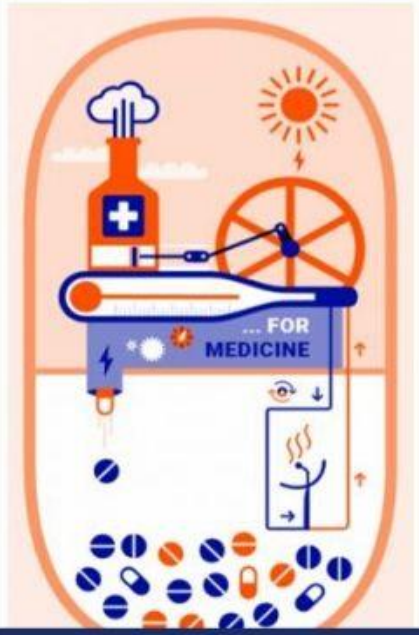
WEBINAR

ISES Infographics - Solar Thermal Heat for Industry Processes





10 March 2020
1PM GMT/UTC

International Solar Energy Society

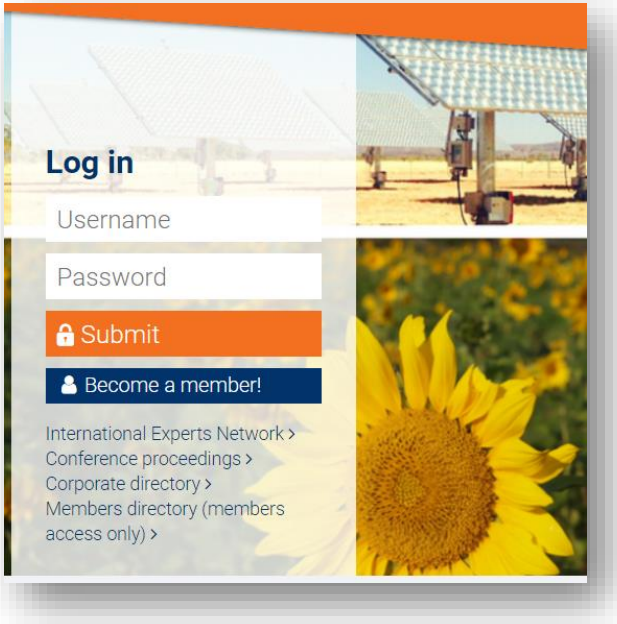
- ✓ The International Solar Energy Society, ISES, is a non-profit UN-accredited membership NGO.
- ✓ Our vision: 100% renewable energy for all, used efficiently and wisely.
- ✓ ISES represents a diverse membership of academics, researchers, energy practitioners, consultants, students, businesses and advocates.
- ✓ ISES works together with like-minded organizations from countries all around the world to advance the renewable energy transformation.

ISES Membership benefits

Exclusive content for ISES Members at www.ises.org

- ✓ Webinar – unlimited access to presentations from webinar panelists, webinar recordings
- ✓ Events - Members discounts or even free registration
- ✓ ISES monthly newsletters – follow our progress
- ✓ Solar Energy journal – discounted member rate
- ✓ ISES online bookshop - reduced prices

Support ISES and become a member!

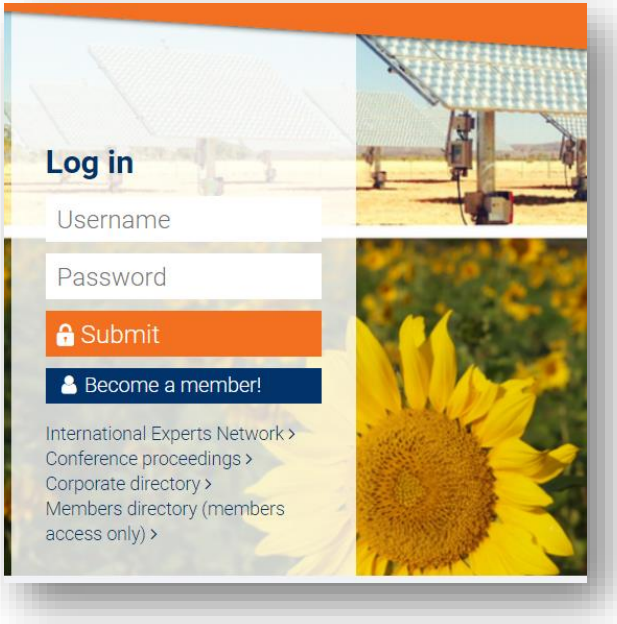


Special Offer - 20% Discount

Special offer for today‘s webinar attendees:

- **20% discount when signing up as an ISES member within the next 2 weeks**
- Receive your personal discount code after the webinar and sign up at www.ises.org

Support ISES and become a member!



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ISES webinars for your company or institution

- Sponsor an ISES webinar and reach out to our solar audience from all around the world
- 500+ registrants and attendees per webinar
- Expert speakers reporting on the latest solar technologies, policies and much more
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Arabella Liehr

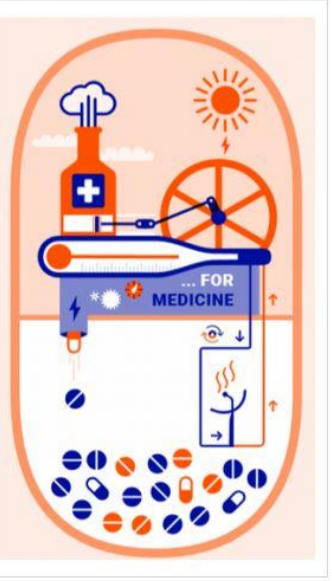
Introducing the ISES infographics is ISES Communications and Outreach Officer Arabella Liehr. Having graduated from Goldsmiths College at the University of London, Arabella brings her background in political science to the realm of solar and renewable energy following her research focus on democratic and sustainable societal processes. Arabella has joined the ISES team in 2018, working on the ISES webinars, infographics, outreach and publications, congresses and the ISES monthly newsletter.

ISES Infographics

- ✓ Started as new ISES outreach project in 2018
- ✓ Process: Topic selection by the ISES board, creation of info-graphics, internal and external review and feedback, translations procured and infographics published
- ✓ First installement: „Dispelling the Myths – Renewables in the Grid“
  - ✓ adressing commonly claimed shortcomings about renewables and creating an easy and accessible way to debunk claimed shortcomings
  - ✓ Eigth graphcis addressing questions of grid integration, storage, RE reliability and availability, transmission

ISES Infographics

- ✓ Second installement of ISES Infographics published in 2019; next installement „solar at home“ planned for 2020
- ✓ Infographics launched at ISES Solar World Congress 2019 in Santiago, Chile
- ✓ Topic of second installement: Solar Thermal Heat for Industry Processes
- ✓ 3 examples for solar thermal applications producing every-day goods with more examples to come
- ✓ Intention: highlighting the already excisting value and success of renewable energy in industry processes
  - ✓ By chosing real-life, day-to-day examples of goods produced through the help of renewable energy, readers gain greater insight into the possibilities of renewable energies



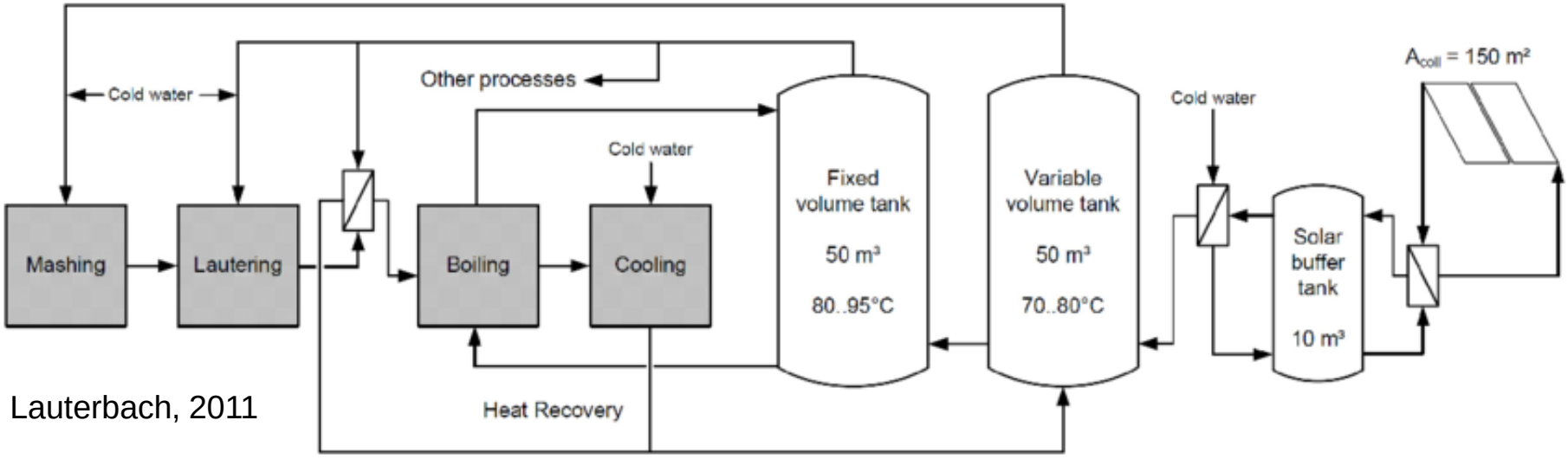
Brewed by the Sun

The beer brewing process requires many steps to produce your favorite after work or weekend drink. Many require some degree of thermal energy, either to pre-heat brewing water, cook the ingredients together, or prepare hot water for cleaning.

Moderator – Steven Meyers

Steven Meyers served on the ISES Executive Committee from 2016 to 2019, heading the ISES infographics working group, putting forward this great publication. Steve is a mechanical engineer with a PhD in Solar and Renewable Low Carbon Heating and will introduce the ISES Infographics publication, the example of solar thermal heat for brewing processes as well as moderate the webinar. Steve holds a global expertise in solar energy, energy efficiency and quantitative research and in 2018 joined Ecosystems, an engineering and construction firm specialized in complex energy ecosystems implementing turnkey energy projects to optimize the performance of institutional, commercial and industrial buildings.

Brewed by the Sun
Hütt Brewery



Lauterbach, 2011

- 155 m² CPC collectors
- Integrated to fresh water preheating
- ~30 single family homes

https://www.huett.de/brauerei/nachhaltigkeit/solarenergie/

Brewed by the Sun
Hofmühl Brewery

- 1000 m^2 CPC collectors
- 80k liters of heating oil saved per year
- *SOLARBIER*®
  - Awarded by the Technical University Munich

https://www.solarbayer.com/Solarsystem-Hofmuehl.html

Brewed by the Sun
Gösser Brewery

- 1500 m^2 FPC collectors
- Combined with district heating and biogas
- Mashing process integration and make up water

http://ship-plants.info/

Solar Thermal Heat for the Electronics we use

The extraction of raw materials for the electronics we use daily is a thermally intensive process. Mined minerals, like lithium for batteries and copper for electrical wires, must be broken down, heated for separation, and dried to create their final product.

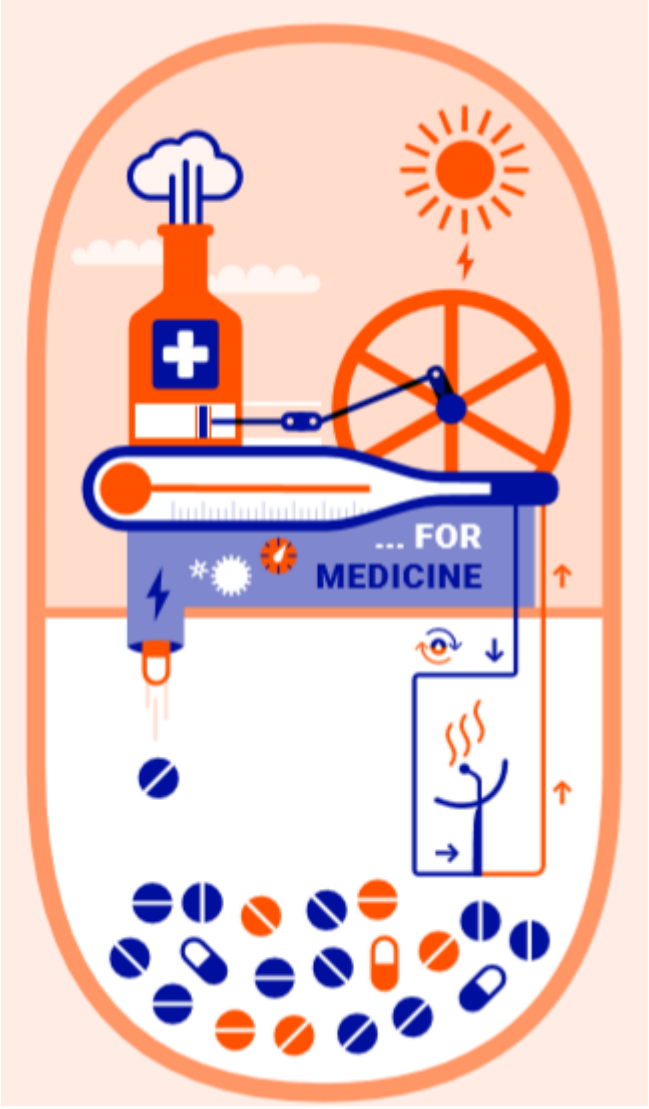
José Miguel Cardemil

Dr. José Miguel Cardemil is Assistant Professor at the Department for Mechanical Engineering at the University of Chile, works as a researcher at SERC - the Solar Energy Research Center Chile and was the Scientific Chair of the ISES Solar World Congress 2019 in Santiago, Chile.

José Miguel will introduce a Chilean example of solar thermal heat used for mining processes in the Atacama Desert of northern Chile.

Solar Thermal Steam for Pharmaceuticals

Covering another essential part of our day-to-day lives, solar thermal heat is also used to make steam. This plays a significant part in many industrial processes such as the production of pharmaceuticals, an industry with a substantial energy demand.



Martin Haagen

Martin Haagen joined Industrial Solar, in 2012 and is responsible for the Business Development in the MENA region. He has been leading the development of the two projects Industrial Solar has realized in Jordan. In addition he also has been involved in consultancy projects focused on policy for solar process heating.

Martin will introduce solar heat in the form of “solar steam” used for industry processes, specifically introducing a solar steam project at RAM Pharma in Jordan which was started in 2015.

Questions and answers

Please type in your questions and we will try to answer as many questions as possible **during the webinar**.

Feel free to send in your questions any time throughout the webinar.

Keep your questions short and precise and write who your question is directed to, so that the moderator can assign directly to the corresponding panelist**.**

Webinar Recording

- The recording as well as the presentations will be available on the ISES homepage 1-2 days after the webinar.

- **Membership benefit: Unlimited access to all ISES webinars + presentations:** ISES website (www.ises.org) through the ISES Members Area -> Log in with your username and password

Next Webinar

Solar heat and electricity: PVT solutions for buildings and industry

EuroSun2020
Call for Abstracts and Participation

- 13th International Conference on Solar Energy for Buildings and Industry
- 01-04 Septmeber 2020 – Athens, Greece
- Call for Abstracts open – Deadline 31 March 2020
- Call for Keynote Speaker Proposals open – Deadline 31 March 2020
- Learn more at eurosun2020.org

We appreciate your participation

We welcome your feedback, please write to public.relations@ises.org with any comments or questions about this and other ISES events.

Please complete the survey which will be sent to you by e-mail. Your feedback is valuable to help us improve these events.